18. The method of claim 1, wherein said sperm are hydrodynamically oriented in the flow of sheath fluid and sperm which are not properly oriented are eliminated by an electronic gating system prior to being passed before said light source.

19. A method to preselect the sex of mammalian offspring comprising:

a) staining intact, viable sperm collected from a male mammal with a fluorescent dye capable of selectively staining DNA in living cells by incubating sperm with the dye at a temperature in the range of about 30°-39° C. for a period of time sufficiently long for staining to take place uniformly but sufficiently short to preserve viability of the sperm;

b) passing the sperm into an electrically conductive and isotonic viability-supporting sheath fluid to form a suspension of sperm which are caused to flow singly in a stream of sheath fluid;

c) passing the sheath fluid containing the sperm before an excitation light source causing the stained DNA to fluoresce;

d) passing the sheath fluid containing the sperm through both a means for detecting the fluorescence of the stained DNA and also a cell sorting means to measure the DNA content of the sperm on the basis of magnitude of fluorescence of the sperm;

e) selecting by said cell sorting means the sperm having a DNA content corresponding to a desired chromosome which will produce the desired gender of offspring, and separating the selected sperm from nonselected sperm; and

f) collecting the selected sperm in a viability-supporting collecting fluid.

20. A method for preparing intact, viable, mammalian sperm for sorting into X- and Y-chromosome-bearing populations based on DNA content, the method comprising staining intact, viable sperm collected from a male mammal with a fluorescent dye capable of selectively staining DNA in living cells by incubating the sperm with the dye at a temperature in the range of about 30°-39° C. for a period of time sufficiently long for staining to take place uniformly but sufficiently short to preserve viability of the sperm.

21. The method of claim 20, wherein said mammal is a swine.

22. The method of claim 20, wherein said mammal is a bovine.

23. The method of claim 20, wherein said dye is bisbenzimide H33342 fluorochrome.

24. The method of claim 20, wherein said incubation is at a temperature of about 39° C. for a period of about 1 hr.

25. The method of claim 20, wherein said incubation is at a temperature of about 35° C. for a period of about 1 hr.

26. The method of claim 21, wherein said incubation is at a temperature of about 30° C. for about 1.5 hr.

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